

(No Model.)

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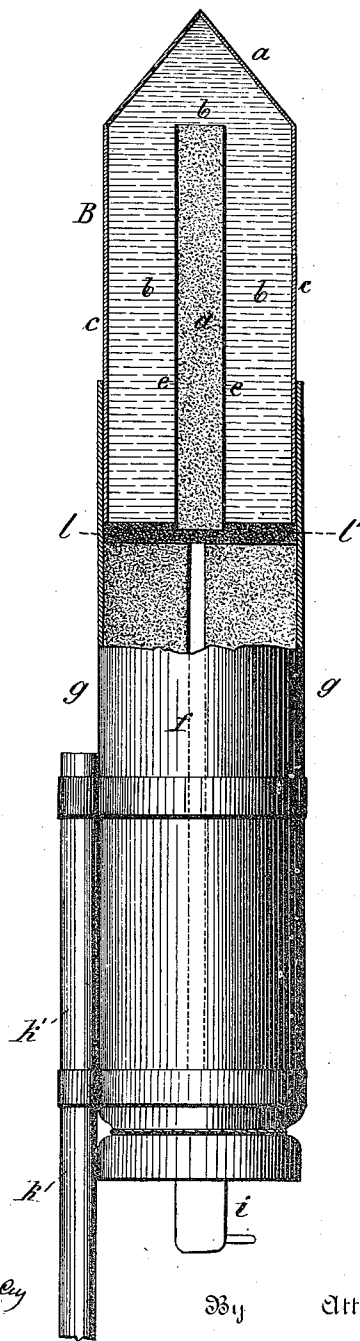
W. MEISSEL.

ROCKET.

No. 379,970.

Patented Mar. 27, 1888.

Fig. 1.



Witnesses

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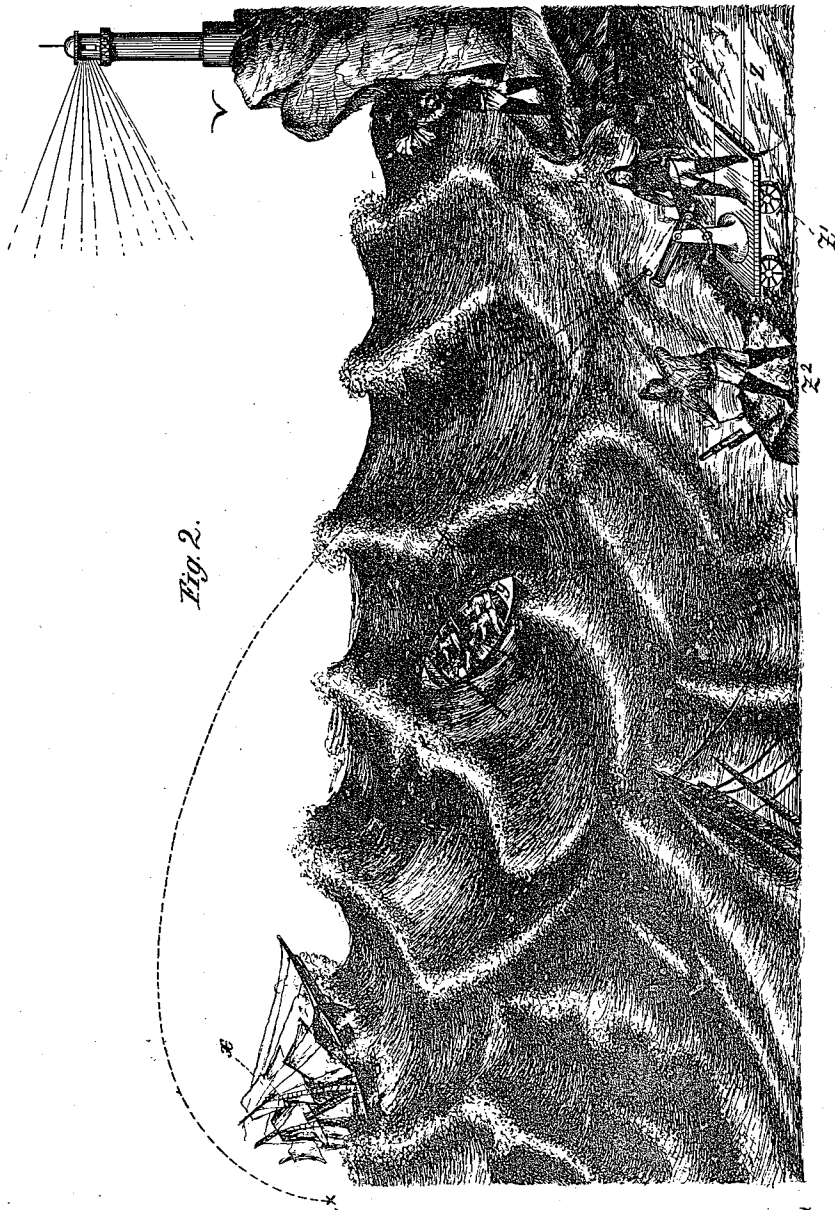
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2 Sheets—Sheet 2.

W. MEISSEL.
ROCKET.

No. 379,970.

Patented Mar. 27, 1888.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILHELM MEISSEL, OF BREMERHAVEN, GERMANY.

ROCKET.

SPECIFICATION forming part of Letters Patent No. 379,970, dated March 27, 1888.

Application filed November 23, 1887. Serial No. 255,981. (No model.) Patented in Germany July 16, 1887, No. 42,628.

To all whom it may concern:

Be it known that I, WILHELM MEISSEL, a subject of the Emperor of Germany, residing at the city of Bremerhaven, in the Empire of Germany, have invented a new and useful Improvement in Rockets for Distributing Oil upon the Surface of Water, (for which I have made an application for a patent to the German Empire,) of which the following is a specification.

My invention relates to that class of rockets which, by means of the gas, produced by the slow burning of meal-powder, rushing against the air without and behind the body of the rocket, are propelled upward, and which, when they have arrived at a proper height, explode.

The nature and object of the invention will be fully understood from the following general description and the annexed drawings, and eventually pointed out in the claim.

Figure 1 is a sectional view illustrating the construction of my newly-invented rocket. Fig. 2 is a diagrammatic view illustrating the working of my newly-invented rocket.

The body of the rocket is designated by *f g l*, which is cylindrical and surrounded by the walls *g*. This body has the usual fuse at *i* and the usual rocket-stick, designated by *k*, which is attached to the body of the rocket by slipping it into the sheath *k'*. In the upper part of this body is inserted the bomb *B*, the outer end, *a*, of which is conical, and the body *b e d* of which is cylindrical. Within this bomb is a chamber, *d*, surrounded by a cylindrical wall, *e*, and communicates with the chamber *l* of the body *f g l* of the rocket, which is separated from the chamber *f* by the perforated partition *l'*. In this body *f g l* is a chamber, *f*, filled with meal powder, which is set on fire by the fuse *i*, and when it has burned far enough up communicates with the chamber *l*, which is filled with priming-powder through the perforation of the partition *l'*, and through that to the chamber *d* of the bomb. This chamber *d* of the bomb is filled with gunpowder or other like explosive material, so that its explosion, when fire is communicated from the body, will burst the bomb to pieces. Between the outside wall, *e*, of the bomb and the wall

e of the chamber *d* is a space, *b*, which is filled with oil, preferably train-oil. This oil, when the bomb is burst, as aforesaid, is scattered as a spray on all sides all around the bomb, the whole device to be as illustrated in said Fig. 1.

To explain the use of this invention, I now refer to Fig. 2, in which *x* designates a ship in distress in a storm. *y* designates a life-boat on its way from the shore to the ship, and *z* designates the shore. The water is supposed to be very rough, the ship in great distress, and the boat sorely tossed. At this juncture the parties on the shore, at *z*, begin to send off these rockets, so that they will pursue the paths designated by the dotted lines, and so that the bombs will burst, a little before reaching the water, between the boat and the shore, between the boat and the ship, and over on the water beyond the ship. As soon as enough of these bombs have been thrown and burst to make a surface of oil over the water, the sea in that place will at once become calm, giving smoother water for the boat and giving the almost foundering ship an opportunity of escape. This same effect may be produced in mid-ocean for a short distance around a distressed ship by throwing out many of these bombs by means of the rocket, as before described, all about the ship; or, if it be more desirable for the purpose of more accurate aim and farther range, the bombs may be constructed to be shot from a gun adapted to that purpose, as illustrated at *z'* of Fig. 2, which, for the purpose of scattering the bombs more effectually, may be constructed to be shot at different angles of elevation, taking care to so distribute the bombs that they will burst as nearly evenly all around the ship as possible.

Actual experiment has demonstrated that a very angry sea may thus be becalmed for a short space and a distressed vessel enabled to outride a storm from which it seemed impossible for her to escape.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, with the bomb *B*, having the conical end *a*, the chamber *b*, filled with oil, and the chamber *d*, filled with explosive material, said body of oil, and said body of ex-

plosive material, of the body of the rocket, into the upper end of which said bomb is inserted, and which body is composed of two chambers, *f* and *l*, within the walls *g*, and separated by the perforated partition *l'*, a body of priming-
5 powder in the chamber *l*, and a body of mealed powder in the chamber *f*, the fuse *i* at the lower end of said body, the sheath *k'* on the side of said body, and the stick *k*, having one

end placed in the said sheath *k'*, all substantially as and for the purpose set forth.

In witness whereof I hereunto set my hand in presence of two witnesses.

WILHELM MEISSEL.

Witnesses:

FRED HANN,

EDW. HENRY STROTHER.